

REMARKS/ARGUMENTS

Claims 1-7, 16, 18 and 20-21 are pending. The claims have been amended. The specification has been amended. No new matter has been introduced. Reexamination and reconsideration of the present application is respectfully requested.

Specification

In the specification, one paragraph has been amended to include information regarding the biological deposit.

Claim Rejections

Claims 1-7, 16, 18 and 20-21 are pending. Claims 8-15, 17 and 19 have been withdrawn pursuant to a Restriction Requirement. The Applicant reserves the right to later file one or more divisional applications directed to the subject matter of the non-elected/cancelled claims.

35 U.S.C. §112, second paragraph

The Examiner rejected to the claims 1-7, 16, 18 and 20-21 for indefiniteness under 35 U.S.C. 112, second paragraph. The Examiner states that "it cannot be determined whether applicant intends stringent or non-stringent conditions." Applicants respectfully traverse this rejection.

The claims do not recite the term "hybridization." As such, the grounds for rejection based upon an absence of reciting hybridization conditions (for example, stringent or non-stringent) are inapplicable and, therefore, improper. Furthermore, what is disclosed in the specification is well within the capabilities of one of skill in the art to make and use the invention as claimed. The specification discloses how the probes are developed and the condition parameters under which hybridization occurs. Page 25, Example 6. For example, the specification states "To achieve the same stringency during the washing step, as in the hybridization step, the wash solution contained 20mM Tris/HCl (pH 7.4), 0.01% SDS, 5 mM EDTA, and NaCl. The concentration of NaCl varied according to the percent formamide used in

the solution. For 20% formamide the NaCl concentration was 215 mM, for 30% it was 120 mM, and for 40% the NaCl concentration was 46 mM...The optimum stringency was determined to be 30% formamide for the S-G-Nsspa-0149-a-A-18 probe. For the S-G-Nsspa-0149-a-A-19 probe the optimum stringency was determined to be 20% formamide. The optimum stringency was determined to be 20% formamide for the probe represented by SEQ ID NO:21, and 20% formamide for the probe represented by SEQ ID NO:24.” Page 27, lines 8-20 to Page 28, lines 1-3. In addition, there are a number of well-known methods and techniques in the art that are available for use in identifying the variants. These methods and techniques are routinely practiced in the art (*e.g.*, alignment search tool (BLAST) (S.F. Altschul et al. 1990. Basic local alignment tool. J. Mol. Biol. 215:403-410) and CHECK_PROBE (B.L. Maidak et al. 1994. The ribosomal database project. Nucleic Acids Res. 22:3485-3487.)).

Thus, even though the claims are not claiming a method for detecting the variants, the specification nonetheless provides more than sufficient disclosure by showing one of skill in the art how to obtain the probes, test bacterial DNA, and isolate and identify the claimed variants. In fact there are many patents that have been allowed in which disclosure of exemplary hybridization condition parameters was found sufficient for enabling similar claims, although there is no recitation of hybridization conditions in the claim language. For example, see U.S. Patent No. 6,905,864 (*Primary Examiner*: Marx; Irene) and U.S. Patent No. 6,825,002 (*Primary Examiner*: Marx; Irene).

The Examiner further states that” the requirement for salt for the bacteria is not addressed with specificity” and that there “appears to be an absolute salt requirement.” Applicants respectfully traverse this rejection.

There is no absolute salt requirement disclosed in the specification or claims. On the contrary, the specification discloses that embodiments of the invention that oxidize ammonia in both freshwater (Examples 11-13) and saltwater mediums (Examples 14-16). The claims likewise encompass both freshwater and saltwater mediums. As such, the Applicants submit that there is no absolute salt requirement for the invention as claimed.

As such, the Applicants respectfully submit that the claims comply with the requirements of 35 U.S.C. 112.

35 U.S.C. §112, first paragraph

The Examiner rejected to the claims 1-7, 16, 18 and 20-21 under 35 U.S.C. 112, first paragraph because “[i]t is not clear if the written description is sufficiently repeatable to avoid the need for a deposit.” The Applicant provides herein a declaration identifying a deposit of the relevant biological material as suggested by the Examiner. The Applicant also provides herein documentation from the depository confirming the deposit. Finally, the specification has been amended to include the information regarding the deposit.

The Applicant respectfully submits that the above rejection has been overcome.

35 U.S.C. §112, first paragraph

The Examiner rejected to the claims 1-7, 16, 18 and 20-21 for non-enablement under 35 U.S.C. 112, first paragraph.

The Examiner rejects claims based upon the written description requirement of patentability. It is alleged that the claims encompass alleviating or preventing ammonia accumulation in “any and all environments” by the disclosed bacterial strains but that the specification only provides working examples of specific mediums. Thus, the Examiner concludes that one of ordinary skill in the art would not recognize Applicants as having possession of the claimed invention.

The Applicants have amended the claims to include the limitation that the methods be used with a man-made aquatic medium. As amended, the claims do not encompass unlimited environments. Rather, the claims cover those man-made aquatic mediums in which ammonia is present and in which the removal of ammonia is desired. Page 1, lines 21-26. Support is shown in the specification as originally filed. The specification discloses the utility in preventing ammonia accumulation in such mediums and gives several definitions and examples. Page 1, lines 21-26; Page 18, lines 8-24. Furthermore, the working examples illustrate a few situations

involving man-made aquatic mediums. A human body cannot be considered a man-made medium.

The specification and working examples provide all the conditions in which the novel bacterial strains function to reduce ammonia. The examples provide step-by-step description of how to obtain the desired strains and several examples illustrate how to prevent ammonia accumulation under different conditions within man-made mediums (water characteristics, ammonia concentration, bacterial strains or mixtures, etc.). The level of skill in the art is high and the steps needed to use the invention are common in the art. Thus, one of skill in the art would be able to extrapolate the many examples provided across the entire scope of the amended claims to include, among other mediums, those associated with paper mills.

In light of the above considerations, Applicants respectfully submit that the amended claims meet the written description requirement of patentability. It is therefore respectfully requested that the Examiner's rejection based upon the written description requirement of patentability be withdrawn.

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Conclusion

This response is being submitted within the three month deadline. In the case any fee is owed, please charge deposit account number 03-3975 (ref. 81289-294309). The Applicant believes that claims 1-7, 16, 18 and 20-21 are now in condition for allowance, and a favorable action is respectfully requested. If, for any reason, the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles telephone number (213) 488-7100 to discuss the steps necessary for placing the application in condition for allowance should the Examiner believe that such a telephone conference would advance prosecution of the application.

Respectfully submitted,

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